GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:2762
ANSWERED ON:02.08.2017
Research in Energy
Jaiswal Dr. Sanjay

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the list of Government/ Government funded institutes currently involved in research in energy and allied areas and if so, the details thereof;

(b) the funds allocated to these institutes over the past three years, their achievements and the details thereof;

(c) whether the Government has any plans of expanding energy research in India especially in new and emerging areas; and

(d) if so, the details thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES
(SHRI Y.S. CHOWDHARY)

(a) Madam, there are several Government / Government funded academic and research institutes under Ministry of New and Renewable Energy, Ministry of Power, Ministry of Science & Technology, Department of Atomic Energy, Department of Space, Department of Defence Research & Development, Ministry of Human Resource Development etc. currently involved in research in energy and allied areas. A list of select Government / Government funded institutes and their research fields supported during last three years is enclosed at Table−I.

(b) The funds allocated to the three energy research institutes, viz., National Institute of Solar Energy (NISE), Gurugram, Haryana; National Institute of Wind Energy (NIWE), Chennai, Tamilnadu and National Institute of Bio Energy (NIBE), Kapurthala, Punjab for carrying out research and development, testing and evaluation in solar, wind and bio-energy, during the last three years were Rs. 63.19 crores., Rs. 40.5 crores and Rs. 39 crores, respectively. In addition, Rs. 594.66 crores have been spent on R&D projects in solar, small wind and hybrid, biogas, biofuel, hydrogen, fuel cells, electric vehicles,energy storage, smart grids, clean coal and small hydro implemented by various R&D/academic institutions, industries during the last three years. The funds provided to these institutes for conducting national, bilateral and multilateral research projects in various energy domains have resulted in standards, testing, evaluation and performance certification, advanced research infrastructure, test beds for technology demonstrations, specialized research manpower, publications in peer reviewed journals and knowledge disclosures / patents.

(c) & (d): The Government has plans to further expand energy research in the country in the new and emerging areas such as clean energy materials, converting sunlight to create storable solar fuels, affordable heating and cooling of buildings, alternate fuels (e.g. methanol and sustainable bio fuels) etc. besides promoting existing areas. The Government has plans to double its investments on research & development in clean energy over five years with 2014-15 as base year.
TABLE−I

LIST OF SELECT GOVERNMENT / GOVERNMENT INSTITUTES INVOLVED IN 'RESEARCH IN ENERGY' AND THEIR RESEARCH FIELDS SUPPORTED DURING LAST THREE YEARS AS STATED IN RESPONSE TO PART (a) OF LOK SABHA UNSTARRED PARLIAMENT QUESTION NO 2762 FOR 2ND AUGUST 2017

Sl.No. Institute Research Field
(1) (2) (2)
R & D Institutes
A. Department of Science and Technology (DST)
1 DST-International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad Energy Storage, Solar Photovoltaics, Methanol Research, Solar Thermal
2 DST-Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru Solar Photovoltaics, Energy Storage, Energy Materials
3 DST-S. N. BOSE Centre for Basic Sciences, Kolkata Energy Storage
4 DST-Indian Association for the Cultivation of Science, Kolkata Energy Materials, Solar Photovoltaics
B. Department of Bio Technology (DBT)
1 DBT-Institute Of Bioresources& Sustainable development, Imphal Bio Energy
2 DBT-Institute of Chemical Technology-Centre for Energy Biosciences, Mumbai Bio Fuels
3 DBT-Indian Oil Corporation-Centre for Advanced Bioenergy Research, Faridabad Bio Fuels
4 DBT-International Centre for Genetic Engineering and Biotechnology-Centre for Advanced Bioenergy Research, New Delhi Bio Fuels
5 DBT-Pan IIT Centre for Bioenergy Bio Fuels

C. Council of Scientific & Industrial Research (CSIR)
1 CSIR-Central Electronics Engineering Research Institute, Pilani Building Energy Efficiency, Solar Thermal
2 CSIR-Central Electro Chemical Research Institute, Karaikudi Solar Photovoltaics, Energy Storage
3 CSIR-Central Institute of Mining and Fuel Research, Dhanbad Clean Coal, Methanol Research
4 CSIR-Central Building Research Institute, Roorkee Building Energy Efficiency
5 CSIR-Indian Institute of Chemical Technology, Hyderabad Clean Coal, Bio Energy, Alternate Fuels
6 CSIR-Indian Institute of Petroleum, Dehradun MethanolResearch & Alternate Fuels
7 CSIR-National Environmental Engineering Research Institute, Nagpur Solar Thermal
8 CSIR-National Physical Laboratory, New Delhi Solar Photovoltaics
9 CSIR- Indian Institute of Chemical Technology, Hyderabad Solar Photovoltaics
(1) (2) (2)
10 CSIR-National Institute for Interdisciplinary Solar Photovoltaics
11 CSIR-National AerospaceLaboratories, Bengaluru Solar Thermal
12 CSIR-Structural Engineering Research Centre, Chennai Building Energy Efficiency
D. Ministry of Earth Sciences (MoES)
1 MoES-National Institute of Ocean Technology (NIOT), Chennai Wave Energy, Ocean Thermal Energy Conversion (OTEC)
E. Ministry of New and Renewable Energy (MNRE)
1 MNRE-National Institute of Solar Energy, Gurugram Solar Thermal & SolarPhotovoltaics
2 MNRE-National Institute of Wind Energy, Chennai Wind Energy
3 MNRE-SardarSwaran Singh National Institute of Renewable Energy SSS-NIBE, Rasulpur Biomass, Bio Fuels
F. Ministry Of Power (MOP)
1 MOP-Central Power Research Institute (CPRI), Bengaluru Research infrastructure and R&D Projects specific to power sector
Academic Institutions
A. IISc, IITs, NITs, IISER and IIEST
1 Indian Institute of Science, Bangalore System Integration, Energy Storage, Solar Thermal, Building Energy Efficiency, Solar photovoltaics, Thermal energy storage, Bio-fuels
2 Indian Institute of Information Technology Allahabad Solar Photovoltaics
3 Indian Institute of Technology Bombay Solar Thermal, Solar Photovoltaics, Energy Storage, Building Energy Efficiency, Renewable Energy Systems, Clean Coal
4 Indian Institute of Technology BHU, Varanasi Energy System Integration
5 Indian Institute of Technology Bhubaneswar Energy System Integration
6 Indian Institute of Technology Delhi Solar Photovoltaics, Energy System Integration, Building Energy Efficiency, Alternate Fuels, Solar Thermal, Clean coal, Methanol Research
7 Indian School of Mines,Dhanbad Clean Coal, Methanol Research
8 Indian Institute of Technology Guwahati Solar Materials, Clean Coal, Methanol Research, Bio-Energy, Solar Thermal
9 Indian Institute of Technology Gandhinagar Building Energy Efficiency, Smart Grids
10 Indian Institute of Technology Hyderabad Energy Storage,Building Energy Efficiency, Alternative fuels,
11 Indian Institute of Technology Indore Solar Photovoltaics, Building Energy Efficiency
12 Indian Institute of Technology Jodhpur Solar Energy, Building Energy Efficiency
13 Indian Institute of Technology Kanpur Solar Photovoltaics, Energy System Integration, Alternate Fuels and I.C. Engine, Building Energy Efficiency
14 Indian Institute of Technology Kharagpur Solar Photovoltaics, Building Energy Efficiency, Energy Storage
(1) (2) (3)
15 Indian Institute of Technology Madras Solar Thermal, Solar Photovoltaics, Building Energy Efficiency, Energy Storage
16 Indian Institute of Technology Mandi Solar Photovoltaics, Renewable Energy Sources
17 Indian Institute of Technology Ropar Solar Photovoltaics, Building Energy Efficiency, Clean Coal
18 Indian Institute of Technology Roorkee Alternate Hydro Energy, Solar Energy, Wind Energy, Renewable Energy, Building Energy Efficiency,
19 National Institute of Technology Calicut Solar Photovoltaics
20 National Institute of Technology Goa Building Energy Efficiency
21 National Institute of Technology Jaipur Solar Photovoltaics
22 Maulana Azad National Institute of Technology, Bhopal Building Energy Efficiency
23 Malaviya National Institute of Technology, Jaipur Solar Thermal Energy, Energy from Bio-mass, Renewable Energy , Photovoltaic Plants, Building Energy Efficiency
24 National Institute of Technology Nagpur System Integration
25 National Institute of Technology Rourkela System Integration, Building Energy Efficiency
26 National Institute of TechnologyTiruchirappalli Solar Photovoltaics,Building Energy Efficiency
27 National Institute of Technology Surathkal Solar Photovoltaics, Building Energy Efficiency
28 National Institute of Technology Warangal System Integration
29 Indian Institutes of Science Education and Research, Pune Solar Photovoltaics, Energy Storage
30 Indian Institutes of Science Education and Research, Thiruvananthapuram Solar Photovoltaics
31 Indian Institute of Engineering Science and Technology, Shibpur Solar Photovoltaics, Building energy Efficiency
B. Central Universities
1 Central University of Jharkhand, Ranchi Solar Photovoltaics
2 Pondicherry University, Puducherry Solar Photovoltaics, Energy Storage
3 University of Hyderabad, Hyderabad Solar Photovoltaics
C. State Universities
1 Anna University, Chennai Solar Photovoltaics& Thermal, Energy Storage, Building Energy Efficiency
2 Indraprastha Institute of Information Technology, New Delhi Building Energy Efficiency
3 Indira Gandhi Institute of Technology, Sarang Clean Coal
4 JadavpurUnniversity, Kolkata Solar Photovoltaics, System Integration, Building Energy efficiency

5 Maharaja Sayajirao University of Baroda, Vadodara Solar Photovoltaics
6 Pune University, Pune Solar Photovoltaics, Solar Thermal
7 Tumkur University, Tumkur Solar Photovoltaics

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